Beam Power Tube

NOVAR TYPE

For TV Horizontal-Deflection-Amplifier Applications

GENERAL DATA

Electrical:

Heater Characteristics and Ratings:			
Voltage (AC or DC)	6.3 ± 0.6		volts
Current at heater volts = 6.3	1.200		amp
Peak heater-cathode voltage:			
Heater negative with respect to cathode	200	max.	volts
Heater positive with respect to cathode	200[a]	max.	volts
Direct Interelectrode Capacitances (Approx.):[b]			
Grid No.1 to plate	0.26		pf
Grid No.1 to cathode & grid No.3, grid No.2, and heater	15.0		pf
Plate to cathode & grid No.3, grid No.2, and heater	6.5		pf

Characteristics, Class A_1 Amplifier:

			Triode Connection[c]	
Plate Voltage	60	250	150	volts
Grid-No.2 Voltage	150	150	150	volts
Grid-No.1 Voltage	0	-22.5	-22.5	volts
Amplification Factor	–	–	4.4	
Plate Resistance (Approx.)	–	15000	–	ohms
Transconductance	–	7100	–	μmhos
Plate Current	390[d]	70	–	ma
Grid-No.2 Current	32[d]	2.1	–	ma
Grid-No.1 Voltage (Approx.) for plate ma. = 0.1	–	-42	–	volts

Mechanical: ←

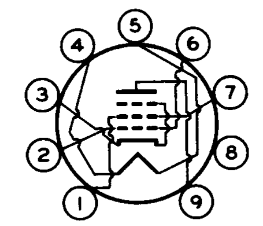
Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	3.410"
Maximum Seated Length	3.030"
Length, Base Seat to Bulb Top (Excluding tip)	2.510" to 2.690"
Diameter	1.438" to 1.562"
Bulb	T12
Socket	Cinch Mfg. Co. No. 149 19 00 033, Industrial Electronic Hardware Co. No. SO-0968-SLI, or equivalent
Base	Large-Button Novar 9-Pin (JEDEC No. E9-76)

← Indicates a change.

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Basing Designation for BOTTOM VIEW. 9NZ

Pin 1 - Grid No.2
Pin 2 - Grid No.1
Pin 3 - Cathode, Grid No.3
Pin 4 - Heater



Pin 5 - Heater
Pin 6 - Grid No.1
Pin 7 - Grid No.2
Pin 8 - Do Not Use
Pin 9 - Plate

HORIZONTAL-DEFLECTION AMPLIFIER

Maximum Ratings, *Design-Maximum Values:*

For operation in a 525-line, 30-frame system[e]

DC PLATE-SUPPLY VOLTAGE	770 max.	volts
PEAK POSITIVE-PULSE PLATE VOLTAGE[f].	6500 max.	volts
PEAK NEGATIVE-PULSE PLATE VOLTAGE	1500 max.	volts
DC GRID-No.2 (SCREEN-GRID) VOLTAGE.	220 max.	volts
DC GRID-No.1 (CONTROL-GRID) VOLTAGE	-55 max.	volts
PEAK NEGATIVE-PULSE GRID-No.1 VOLTAGE . . .	330 max.	volts
CATHODE CURRENT:		
Peak.	550 max.	ma
Average	175 max.	ma
GRID-No.2 INPUT	3.5 max.	watts
PLATE DISSIPATION[g].	17.5 max.	watts
BULB TEMPERATURE (At hottest point on bulb surface).	240 max.	°C

Maximum Circuit Values:

Grid-No.1-Circuit Resistance:		
For grid-resistor-bias operation.	1 max.	megohm

[a] The dc component must not exceed 100 volts.

[b] Without external shield.

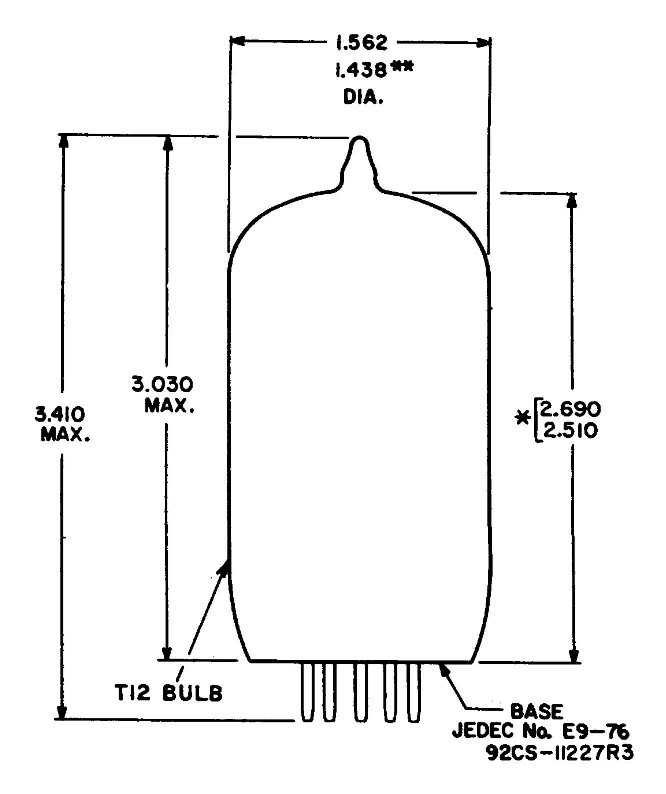
[c] With grid No.2 connected to plate.

[d] This value can be measured by a method involving a recurrent wave form such that the maximum ratings of the tube will not be exceeded.

[e] As described in "Standards of Good Engineering Practice Concerning Television Broadcast Stations", Federal Communications Commission.

[f] This rating is applicable where the duration of the voltage pulse does not exceed 15 per cent of one horizontal scanning cycle. In a 525-line, 30-frame system, 15 per cent of one horizontal scanning cycle is 10 microseconds.

[g] An adequate bias resistor or other means is required to protect the tube in the absence of excitation.



ALL DIMENSIONS IN INCHES

** APPLIES IN ZONE STARTING 0.375" FROM BASE SEAT.

* MEASURED FROM BASE SEAT TO BULB-TOP LINE AS DETERMINED BY A RING GAUGE OF 0.600" INSIDE DIAMETER.

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AVERAGE CHARACTERISTICS

